ABOUT THE METHODS OF AUTOGENIC THERAPY[1]

Wolfgang Luthe

One of the most important assumptions of autogenic therapy is that nature has provided man with homeostatic mechanisms not only to regulate fluid and electrolyte balance, blood pressure, heart rate, wound healing and so on, but also to readjust more complicated functional disorders that are of a mental nature. In autogenic therapy the term *homeostatic self-regulatory brain mechanisms* is often used.[38, 39,51] This concept assumes that when a person is exposed to excessive disturbing stimulation (either emotional or physical trauma), the brain has the potential to utilize natural biological processes to reduce the disturbing consequences of the stimulation (i.e., neutralization). At the mental level some of this self-regulatory neutralization or recuperation occurs naturally during sleep and dreams. [40,48]

The techniques developed and used in autogenic therapy have been designed to support and facilitate the natural self-healing mechanisms that already exist. Thus the emphasis is not in trying to control the natural system but rather on helping natural systems use their inherent potentials of self-regulatory adjustment more fully.

There has been a tendency in American medicine to overemphasize symptomatic treatment and to overlook the unity of the individual. This "left-hemispheric" approach[9,21,43,56] has resulted in a preference for easy clearcut mechanical solutions (e.g., inject, operate, prescribe more medication).

These pragmatic solutions all attempt to control or modify certain functional or structural variables through manipulative procedures imposed onto the biological system from outside. The approach often adopted is analogous to the way one would go about repairing a defective television set. In many situations (e.g., pneumonia, acute appendicitis) this outside manipulation of the defective biological system is clearly the best solution to the problem. However, there exists a great variety of functional and psychosomatic disorders where such a mechanical, "nonhomeostatic" approach is not the best answer and many even be deleterious.[17, 18]

Autogenic therapy has always seen the mind and body as a unit and approaches mental and bodily functions simultaneously. Autogenic methods permit adaptation of the treatment programs to the individual. Of practical importance is the fact that patients learn to do most of the therapeutic work by themselves at home, and that the most frequently used clinical method, autogenic standard training, can be applied in groups ranging from elementary school children to the elderly. In certain disturbances such as sleep disorders[48] or examination anxiety[52] significant improvements within 2 weeks or less are not exceptional. Often patients are freed of their reliance on tranquilizers and hypnotics. The practical implications are obvious. The degree of dependence on the physician is kept as a low level. In addition, the therapist using autogenic approaches is able to make more efficient use of his time than with most other psychotherapeutic

[1] Adapted from E. Peper, S. Ancoli & M. Quinn, (1979), *Mind/Body Integration*, New York: Plenum, pp 167-186.

methods. An increased number of patients can be treated in the same amount of time. (See Figure 1.)

The combination of methods available provides effective and flexible treatment techniques for many organic, psychosomatic, and psychiatric disorders.

In the area of nonclinical application, autogenic methods have been used in everyday life both to improve the efficiency of various bodily or mental activities and as a psychophysiologic self-protection against the damaging effects of stress. The encouraging results of regular practice of AT and specifically adapted approaches have stimulated increasing application and research in the areas of education, industry, sports, and creativity.

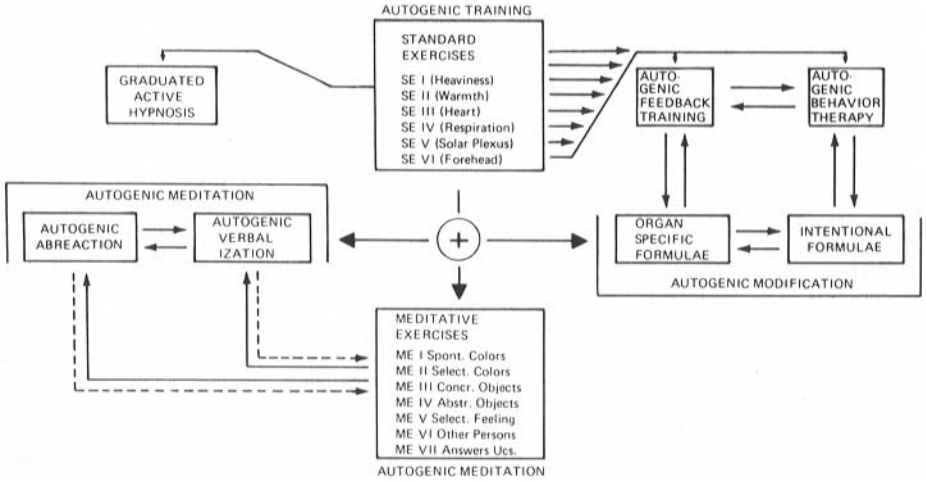

Figure 1.

Autogenic methods: combinations and procedural interaction. This illustrates the various methods that can be applied in autogenic therapy. *Autogenic Training* (AT) is the foundation for all other approaches and is therefore the most important and widely used technique. Of the many methods, autogenic training alone is sufficient for the majority of treatment situations. However, in 10-20% of patients, because of the history or the nature of the disorder, a more intensive method called *Autogenic Neutralization* (AN) may be necessary. *Meditative Exercises* (ME), *Autogenic Modification* (AM), and *Graduated Active Hypnosis* (GAH) are less frequently employed and are reserved for special situations. *Autogenic Feedback Training* (AFT) and *Autogenic Behavior Therapy* (ABT) are relatively new techniques that are the result of interdisciplinary interaction.

Over the past 10 years an increasing number of studies of the effects of autogenic training (AT) have provided information pointing toward the practical usefulness of psychophysiologic relaxation in the area of education. University professors, schoolteachers, adolescent high school students, and younger elementary school children who learn AT for noneducational reasons consistently report favorable effects that directly or indirectly influence their behavior and performance in the educational sector. [52] Such individual observations have been confirmed by controlled studies focusing on specific areas in the field of education.[2, 3,7,49,50,53]

The result of AT-related investigations with different educational levels (i.e., elementary grades to postgraduate studies) have been consistently favorable irrespective of sociocultural differences between countries (e.g., Canada, France, Germany, Japan, Romania, USA, USSR) in which

observations were obtained.[52] Such studies have focused, for example, on observation of classroom behavior of young Japanese children after their overconcerned mother began to practice AT[71]; on improvement of athletic performance and psychodynamic changes in high school students; on reduction of examination anxiety in Canadian, American, French, and German university students; on improvement of academic performance in American high school students as well as in disadvantaged 7-year-old black students in Philadelphia[24]; on the use of AT by students of pedagogical institutes and on its application to neurotic school children in the Soviet Union.

In the areas of sports, a variety of reports indicate that the regular practice of autogenic methods leads to better performance with improved reactivity and coordination, better endurance, faster recuperation, and reduction or elimination of psychoreactive disturbances that tend to occur before important tournaments.

AUTOGENIC TRAINING

Standard Exercises

Autogenic training (AT) is the basic and most frequently applied treatment technique that a patient can carry out himself by using passive concentration upon certain combinations of psychophysiologically adapted stimuli. Passive concentration on autogenic standard formulas can be so tailored that a measurable normalizing influence upon various bodily and mental functions will result.[38, 39,40,67]

Psychophysiologically, autogenic training is based on three main principles: mental repetition of topographically oriented verbal formulae for brief periods (e.g., 30 seconds); mental activity known as "passive concentration"; and reduction of exteroceptive and proprioceptive afferent stimulation (specific training postures). The mental practice periods are always terminated in three consecutive steps by briskly flexing the arms, taking a deep breath, and opening the eyes.[67]

The verbal formulas are organized into six standard exercises (SEs) that are physiologically oriented. The context of these formulas is focused on the general topics of heaviness and warmth in the extremities, and on calm and regular function of the heart, self-regulation of respiration, soothing warmth in the upper abdomen (solar plexus) area, and agreeable cooling of the forehead. Occasionally, a complementary exercise called the First Space Exercise (SP-1)[44,45,46] is taught prior to beginning work with the orthodox series of standard exercises. (The first space exercise has only recently been adapted from Fehmi's biofeedback procedure and used with patients in AT. It involved the sequential imagination of spaces between symmetrical parts of the body. The pattern of formulae is as follows: "I imagine the space between my eyes…[about a 5-second interval] I imagine the space between my ears…[5-second interval]" and so on for elbows, wrists, hands, fingers, knees, heels, feet, toes, and legs. The aim is to more specifically mobilize nondominant right hemispheric functions.)

Passive Concentration. The patient's attitude while repeating a formula in his mind is conceived of as "passive concentration." Passive concentration (and passive volition) may best be understood by comparing it to what is usually called "active concentration" and active volition.

Concentration in the usual sense has been defined as "the fixation of attention" or "high degrees of attention" or "the centering of attention on certain parts of experience." This type of concentration involves the person's interest, goal-directed investment of mental energy and effort, and concern about the result during the performance of the task.

In contrast, passive concentration implies a casual attitude during the performance of a task and complete indifference about the result. Any goal-directed effort, active interest of apprehensiveness must be avoided. The patient's casual and passive attitude toward the effects of a given formula is regarded as one of the most important factors of the autogenic approach.

The effectiveness of passive concentration on a given formula depends on two other factors, namely, the mental contact with the part of the body indicated by the formula, and keeping up with a steady flow of filmlike (verbal, acoustic, visual) representation of the autogenic formula in one's mind.

The duration of passive concentration (PC) on a formula should be adapted to the functional situation of the trainee (e.g., 5, 10, 30, or 60 seconds in the beginning). Later, when the trainee has no difficulty in maintaining an adequate level of passive concentration and there are no undesirable reactions (e.g., circulatory), the exercises may be extended to 3, 5, or 10 minutes and longer.

Holistic Concept of Therapy

To the autogenic therapist the level of functional harmony is of central importance; it is determined both by a person's adaptation to environmental demands and by adaptation to inner realities that evolve from (a) his genetic constellation (i.e., "authentic self") and (b) the developmental consequences of his life experience (i.e., the "natural self"). In other words, the assumption is that reaching and maintaining a desirable level of inner harmony and living in favorable agreement with the "authentic self" means (a) the recognition of (genetically and otherwise) given limits of functional possibilities and (b) the use of the circumstances of life to promote development in agreement with the biologically determined potential (i.e., self-realization); (c) the avoidance, reduction, or elimination of those stimuli and circumstances that are known to produce antihomeostatic and harmony disturbing effects.

Practically, the development of inner harmony with the "authentic self" is accomplished in several ways. Autogenic training plays the key role by mobilizing self-regulatory homeostatic forces (shirt to a trophotropic state that is diametrically opposed to stresslike states). The patient, through the combination of autogenic techniques, not only experiences functional adjustments (e.g., reduced anxiety level) but also develops increased sensitivity as to "what is good" and "what is not good" for his system.

Patients often need explanations why, from a homeostatic point of view, it is advisable to avoid situations that would further accumulate anxiety stimuli. For instance, the avoidance of violent movies, attendance at funerals, or visits to dying persons might be suggested to a person who has an overload of anxiety or aggression. Likewise, it may be recommended to a person to give up risky motorcycle driving or skydiving; or a change in a conflict-loaded work situation may be

advised. The techniques used to communicate these suggestions include confrontation, "paradoxical intention,"[20] and support.

The Role of Medication

Since autogenic therapy aims at restoring and supporting natural homeostatic functions as quickly and effectively as possible, the reduction or elimination of psychopharmacological agents (particularly diazepam, trifluoperazine, barbiturates, amphetamines, and monoamine oxidase inhibitors) that tend to interfere with this process is important. Among the various families of psychopharmacological agents, certain drugs have been found to interact better with AT than others. The following agents have been observed to interfere the least with the homeostatic action of AT: anxiolytic—chlordiazepoxide, meprobamate; anti-depressant—imipramine; neuroleptic—chlorpromazine, promazine.

Reduction in medication is the rule in a variety of disorders, e.g., chronic bronchial asthma, constipation, epilepsy, hayfever, essential hypertension, primary glaucoma, migraine, sleep disorders, and certain disorders of cardiac rhythm. Particularly important in the management of diabetic trainees is that a progressive lowering of insulin requirements occurs as experience in the practice of AT increases.

AT and Other "Relaxation Response"-Promoting Approaching

There is general agreement that different methods such as transcendental meditation (TM), various forms of yoga (Y), Zen meditation (Z), progressive relaxation (PR),[5,28] certain approaches of heterohypnosis (HH),[61] and autohypnosis (AH),[34,37] certain biofeedback techniques (BF),[22,23] and certain approaches in behavior therapy (BT)[75] can contribute desirable elements for improvement of mental and physical health through the elicitation of a "relaxation response."[4] The trophotropic nature of the "relaxation response" and the underlying "integrated nervous system reaction" is functionally diametrically opposed to stress and provides a favorable but relatively nonspecific situation that permits certain homeostatic mechanisms to work with greater efficiency (e.g., recuperation from stressor effects).

In comparing the technical elements of these approaches, we find that in addition to common basic elements (e.g., nature of mental device, passive attitude, decreased muscle tone, quiet environment, trained instructor)[4] there are psychophysiologically important difference (e.g., heteroinstructed, self-instructed; topographic, nontopographic; directive, nondirective; symptomatic, nonspecific; verbal, nonverbal) in procedural details.[58,61] Each of these procedural details may exert therapeutically desirable, undesirable, or relatively nonspecific effects depending on the patient's history and actual functional situation. This leads to the question: Who should practice what technique, in what manner, for how long and under what kind of treatment control?

In certain specific situations (e.g., intractable pain, hyperemesis gravidarum) "monosymptomatic" approaches may be the method of choice. For example, in hyperemesis gravidarum, symptomatic treatment with heterohypnosis or biofeedback could be a serious technical error when, for example, the headache is a homeostatic signal calling for a release of a suppressed need for crying. When a history of serious accidents is prominent and is likely to constitute a major part in psychophysiological disorders it is therapeutically unrealistic to expect

TM, Z, Y, BF, HH, AH, PR, BT, AT, or psychoanalysis to be adequate. Such cases required the combined application of AT and AA. From a pathophysiologic and homeostatic point of view, long-term treatment results tend to be better as the natural forces of homeostasis are given support to achieve and maintain favorable levels of functional adjustment.

AUTOGENIC MODIFICATION

Autogenic modification consists of two complementary approaches: (a) psychologically oriented "Intentional Formulas" (IF) and (b) physiologically oriented "Organ Specific Formulas" (OF). Both approaches are designed to use the peculiar psychophysiological nature of the autogenic state as a functional vehicle for obtaining specific desirable effects that were not obtained through the regular standard exercises. For example, when chronic constipation has not improved sufficiently after 10 weeks of AT, the formula "My lower abdomen is warm" may be added to the end of the series of SEs in order to stimulate organ-specific activation or peristalsis in the colon, and to increase blood flow in the colon wall.[51] Or, when the regular practice of AT does not readjust (anxiety) dream-related awakening within 2 months, desirable readjustments of the patient's dream behavior and sleep pattern may be obtained by adding the IF: "In my dreams I remain passive and go along with the messages of my brain."[40,48]

AUTOGENIC MEDITATION

The practice of the seven meditative exercises is not indicated if a trainee has difficulty in maintaining an adequate level of passive concentration over longer periods (e.g., 30 to 50 minutes) and if there is evidence of disturbing autogenic discharges. However, occasionally the visual imagery components of the meditative exercises have been successfully used in the management of specific psychosomatic problems, in combination with autogenic behavior therapy techniques,[69,70-73] and as a complementary approach in psychoanalytic therapy.

The orthodox procedure as conceived by J. H. Schultz[67] distinguishes the following steps: (a) preparatory training; (b) ME I: spontaneous experience of colors; (c) ME II: experience of selected colors; (d) ME III: visualization of concrete objects; (e) ME IV: visualization of abstract objects; (f) ME V: experience of a selected state of feeling; (g) ME VI: visualization of other persons; (h) ME VII: answers from the unconscious.

AUTOGENIC NEUTRALIZATION

The hypothesis that there exist biological self-regulatory brain activities is not new. One of the elements that distinguishes autogenic therapy from others is the assumption that the patients own system knows best how certain functional disturbances come about and how to reduce their disturbing effects (neutralization). This assumption is based on the puzzling observation that the regular practice of passive concentration on the autogenic formulas helps to improve many medical and psychological disorders. Since it was difficult to understand how the repetition of the formulas together with passive concentration was solely responsible for the significant

improvements in patients' symptoms, it was hypothesized that unknown brain functions participated and that the altered state of consciousness produced by the technique (the autogenic state) facilitates the activity of (otherwise inhibited) self-regulatory mechanisms that promote the normalization of bodily and mental disorders.[39, 67]

Observations of spontaneous training symptoms or autogenic discharges that occur during the autogenic state indicate that they have no apparent relationship to the content of the formulas. Detailed studies of these discharges showed that they occurred in great variety and had a unique profile for each patient. Often there was a close relationship to the patient's complaints, his clinical condition, and certain events of his past. In some ways, they resembled phenomena described during "sensory isolation," during certain stages of sleep (e.g., motor discharges, dreams), and responses obtained by direct electrical stimulation of cortical and subcortical structures.[60] It was therefore hypothesized that the autogenic state facilitates spontaneous discharges from certain parts of the brain that have a need for "unloading," and that this discharge activity is one of the therapeutic factors at work during AT. On the basis of this hypothesis, two different techniques of autogenic neutralization—autogenic abreaction (AA)[39,40] and *autogenic verbalization* (AV)[67]—were developed to enhance the therapeutic effect of AT by giving the brain a better opportunity to neutralize and release whatever it needs to discharge.

Autogenic Abreaction

This method is not required if the training symptoms are not particularly disturbing and satisfactory progress is being made with AT alone. However, if an increasing number of disturbing phenomena are noted, the introduction of AA may be necessary. Restlessness, vestibular discharges such as unpleasant dizziness and marked body image distortions, pain, headaches, bursts of anxiety, repeated episodes of disagreeable somesthetic sensations, inability to continue the exercises, massive interference from intruding thoughts, and the frequent appearance of differentiated visual phenomena are some of the autogenic discharges that indicate that there is a need in the patient to unload disturbing material.

Clinical observations have shown that certain events in patient's history have particularly damaging effects and therefore increase the likelihood that AA will be necessary. These factors include life-threatening accidents (especially when followed by unconsciousness); inhalation anesthesia; near drowning; severe drug intoxications (e.g., unconsciousness following and overdose); sexual deviations (e.g., homosexuality)[8]; and anxiety-provoking forms of religious education.

The technique of AA includes the following elements: (a) The patient is asked to mentally shift from the initial use of passive concentration on autogenic formulas to a spectatorlike attitude called passive acceptance. The mental shift comes during or after a 2- to 3-minute period of repetition of the heaviness formulas. (b) In the autogenic state and with this "carte blanche" attitude, the patient verbally describes, without restriction, everything that he experiences. The description may include sensory, motor, visual, intellectual, auditory, olfactory, affective, or vestibular phenomena. (c) Both the patient and the therapist must observe and respect the therapeutic *principle of noninterference*. Interventions are limited to the management of resistance and should be made only after it repeatedly becomes obvious that the neutralization is blocked from proceeding in a direction already indicated by the patient's self-regulatory

elaborations. (d) The period of description should be prolonged until a sufficient level of neutralization is reached. (e) The AA is terminated in the usual three-step sequence by flexing the arms, taking a deep breath, and opening the eyes. (f) The entire AA is tape-recorded by the patient, and as soon as possible after the session, he types a verbatim transcript and, after reading it aloud (verbal reexpression during an unaltered state of consciousness) includes a commentary (feedback, integration). (g) The patient carries out unsupervised AAs at home as soon as he has acquired a satisfactory level of competence with the technique.[39,40]

When autogenic abreaction is applied, it is important that the patient practices the standard exercises regularly and demonstrates that his therapeutic cooperation is reliable. The notes on his training symptoms during AT are usually a good indication of motivation. Unless it is practical to carry out a large portion of the therapy in the office, AA should not be started with patients who do not seem to have the motivation to work intensively on their own.

During a typical AA session, the therapist may initially assist and heteroverbalize the heaviness formula. The patient begins to describe his experience as soon as he notices the onset of training symptoms. If the patient does not begin to talk by the end of the heaviness sequence, the following supportive formula may be added: “And now you imagine yourself in a meadow, and tell how the meadow looks today or whatever else you see, or feel or think.” The supportive “meadow image” was chosen since it is a relatively neutral situation that can be taken as a convenient beginning point. However, when this technical support is used it must be clear to the patient that the “meadow” is merely another stimulus (like heaviness) and that no mental effort should be made to obtain or maintain the image.

Generally, one can distinguish four large groups of initial patterns of dynamics of autogenic neutralization:

a. Patterns of predominantly intellectual elaborations, which may or may not be associated with sporadically occurring visual phenomena or other bodily oriented modalities of discharges.
b. Patterns dominated by a variety of sensory (viscerosensory) and motor (visceromotor) phenomena with or without sporadically interjected intellectual or visual elaborations.
c. Patterns in which visual elaborations assume central importance and bodily oriented phenomena or intellectual elaborations are of secondary nature, which may or may not participate occasionally.
d. Mixed patterns in which all knows modalities of brain-directed elaborations may participate with variable intensities.

An AA may last 15 to 150 minutes, and it is important that the patient keeps describing until the pattern of homeostatic elaborations indicates that nothing further is happening and he feels quite comfortable. However, if such a self-regulatory ending is not reached and premature termination cannot be avoided, it is possible to minimize disagreeable aftereffects (e.g., headaches, depressive feelings, anxiety attacks, nightmares) by ending the AA during a positive or relatively neutral phase.

Although limitations of space do not permit a comprehensive presentation of the mechanisms of autogenic neutralization, a few observations and theoretical issues do deserve special mention.

On the surface, it may seem that the technique simply involved the pairing of a relaxed "trophotropic" state with a continuous uncensored description of spontaneous elaborations (e.g., sensory, motor, vestibular, visual, ideational, affective), thereby producing neutralization. However, this explanation is an oversimplification of the complex and unique dynamics observed. The elaborations are often symbolic, primary process, or dreamlike, and seem to be closely related to (nondominant) right-hemispheric functions.[43]

The emphasis on right-hemisphere activity observed during AA is in keeping with the hypothesis that part of the transmission from one hemisphere to the other can be selectively and reversibly blocked. Bogen and Bogen proposed that "certain kinds of left-hemisphere activity may directly suppress certain kinds of right-hemisphere action. Or they may prevent access to the left hemisphere of the products of right-hemisphere activity."[9] Similarly, Galin[21] considered the hypothesis that "in normal intact people, mental events in the right hemisphere can become disconnected functionally from the left hemisphere (by inhibition or neuronal transmission across the cerebral commissures), and continue a life of their own. This hypothesis suggests a neurophysiological mechanism for a t least some instances of repression and an anatomical locus for unconscious mental contents."[21] The corollary of this theory is that a functional imbalance or inhibition between the two hemisphere participates in the development of psychodynamic and psychosomatic disorders. One can further hypothesize that AA facilitates communication between the two cerebral hemispheres and allows repressed, primary-process-like, disturbing material (presumably right hemispheric) to become integrated into logical, analytical, verbal awareness (largely left hemispheric).[43] The result is a reduction in the disturbing potency of traumas (neutralization, resolution of intrapsychic conflict).

During AA the patient's homeostatic brain mechanisms automatically select and control the release of disturbing material, adapt the process of neutralization to the patient's level of tolerance, modify and repeat certain themes until sufficient neutralization is achieved, shift to other "pressure areas" once neutralization of a given theme is sufficiently advanced, neutralize negative transference, and signal that the neutralization of certain themes is terminated. Although the reason for some of these or other dynamics may be unclear to both the patient and the therapist, it invariably turns out that the patient's homeostatically directed brain mechanisms knew the reasons for proceeding in a particular manner.[39]

Accidents and Traumatizing Events. Extensive clinical experience with AT and particularly AA indicates that the damaging effects of accidents and traumatizing medical procedures (e.g., inhalation anesthesia, bone marrow puncture, ECT), particularly in conjunction with artificially induced alteration of loss of consciousness have been underestimated. The neglect of this area may stem from the fact that no detectable neurological lesions are involved and no approach, other than autogenic therapy, has the tools to cope with the disruptive psychophysiological effects. Thus these patients are often dismissed as malingerers with a "compensation neurosis."

The effects of such physical traumas tend to become functionally linked to other unrelated events and thereby aggravate existing problems (e.g., homosexuality,[8] psychosomatic disorders). Since

the experience and its consequences are nonverbal, explorations of this field is difficult or impossible by verbal approaches alone. During AT and AA, some patients may transitorily have feelings of being about to lose consciousness, unpleasant vestibular phenomena (e.g., spinning, dizziness, falling), and unpleasant physical sensations in a previously injured areas of the body accompanied by anxiety. Such phenomena are usually seen in patients who have a history of disturbing physical trauma.[39,40]

Autogenic Verbalization

Autogenic verbalization is a more limited method of neutralization.[67] This approach is different from autogenic abreaction in that it does not involved a carte blanche attitude, but rather focuses on a predetermined specific topic such as aggression, anxiety, or obsessive material. For instance, in the autogenic state, after the heaviness formulas, the patient is instructed to verbalize about all the things that make him angry and is encouraged to keep expressing his aggression. A typical verbalization consists of many repetitions of the same theme and usually lasts 10 to 40 minutes. The patient practices the method at home. For correct use of this technique, it should be emphasized that he must verbalize continuously until he is certain that his mind is "empty" and there is nothing more to say. If a verbalization is cut short, disturbing effects may remain mobilized the disagreeable aftereffects may ensure (e.g., headaches, anxiety, irritability, chest pain). The approach is particularly useful when there has been a recent acute disturbance. Close supervision of patients using autogenic verbalization is important because incorrect use of the technique may spontaneously convert into unwanted complicated processes of autogenic abreaction.

The following case illustrates the usefulness of autogenic verbalization in a patient with severe migraine headaches:

Case 4 is a 33-year-old single, female secretary. For 14 years, she had been treated medically and with psychotherapy (nonautogenic) for migraine headache of variable severity. Despite high doses of anxiolytics, antidepressants, and analgesics, for the 6 months prior to her referral for autogenic therapy, her symptoms continued to increase, to the point where she was no longer able to work. She was anxious, "all tied up in knots," depressed, and crying. Her main complaints were unceasing migraine headaches, insomnia, vomiting, anorexia, and very low self-confidence. After 3 months of AT, she was no longer dependent on diazepam, was less anxious, and generally felt better, but she still had several headaches per week and was somewhat depressed. Therefore, imipramine therapy was started, but no further improvement occurred in the next 3 months. Autogenic verbalization on aggression was then taught. In addition to AT, she did a daily verbalization of about 30 minutes with great subjective relief. Almost immediately her symptoms began to dissolve. She returned to work, signed up for an evening course, and began to socialize more. After 1 year of follow-up she was still free of headaches, sleeping well, and free of anxiety and depression.

GRADUATED ACTIVE HYPNOSIS

In contrast to all other autogenic methods, the combination of AT with elements of orthodox techniques of hypnosis aims at obtaining a shift to hypnotic states.[34] The method emphasizes the

exclusive use of self-instruction (i.e., self-hypnosis).[37] After about 2 weeks of preparatory practice of the first and second standard exercise, the hypnotic element of eye fixation (sometimes in combination with monotonous auditory stimuli, e.g., metronome) is added in order to promote the shift to a hypnotic state. Then, after preparatory technical discussion, the patient continues to regularly use the self-induced hypnotic state exercises for implanting (mental repetition) slogan like phrases that are designed to support therapeutically desirable developments. Kretschmer[20,37] recommended this approach for neurotic patients and personality disorders with strong obsessive-compulsive components and as a complementary method to "problem-focused" analytic psychotherapy (i.e., "Zweigleisige Standardmethode," "double-track standard method").[34,37]

AUTOGENIC BEHAVIOR THERAPY

Behavior therapists who were interested in finding a more satisfactory alternative to Jacobson's Progressive Relaxation (PR)[5,28] initiated the use of behavior therapy (BT) techniques (e.g., systematic desensitization) together with autogenic methods (i.e., autogenic behavior therapy).[1,4,27,41] To effectively support the application of behavioral techniques (e.g., systematic desensitization, assertive training, behavioral rehearsal, modeling, flooding) preparatory periods of intensive home practice of standard exercises (e.g., five to eight sets of SE I, SE II, per day for 2 weeks) are frequently used. Other ABT procedures may include frequent practice of the partial exercise, "my neck and shoulders are heavy;" case-adapted use of meditative exercises when therapeutic procedures wish to emphasize work with visual imagination (e.g., preparatory visual rehearsal); occasional use of intentional formulas when additional support in a specific functional area is needed; or the use of autogenic verbalization when massive overload of aggression or anxiety require "deflation" before and during assertive training or systematic desensitization.[22,25,26,69-72]

The complementary use of AT and autogenic abreaction may be valuable when the conventional strategies of BT encounter special problems when attempting to desensitize patients—for example, in cases "in whom it is not possible to reduce anxiety by any of the standard methods"[76] or "in situations where the patient does not experience increased tension upon presentation of stimulus scenes, situations where tension does not decrease, or where it actually increases upon repetition and situations where the procedure itself disturbs the patient."[19]

The substitution of AT for PR led independent investigators to conclude that ABT (a) augments the effects of traditional BT with PR; (b) effects in unit time a more substantial improvement in stress defenses; (c) augments of degree of defense against extrapsychic pressures; (d) facilitates the conditioning routine; (e) provides improvement in personality dynamics that are different from the removal of a symptom or a symptom complex and, in addition that (f) fewer cases fail to respond adequately; (g) there is no abrupt termination of therapy by patients who continue AT; and finally (h) AT "supplies essential therapeutic ingredients at present missing from traditional behavior therapy methods."[25,30]

In behavioral medicine the combination of autogenic therapy with BT techniques can provide satisfactory treatment resulting in specific areas (e.g., food allergy, phobic reactions, writer's

cramp, contact dermatitis, cold-induced dermatitis, muscular dystrophy, collagen disease, recent cerebellar ataxia); of 208 ABT patients, 84% were significantly improved or cured after follow-up periods of 6 to 30 months.[1, 26,41,69-73]

AUTOGENIC FEEDBACK TRAINING

The combination of biofeedback techniques (BT) with autogenic approaches began around 1965 under the influence of Gardner Murphy at the Menninger Foundation with the work of Green, Green, and Walters.[23] As in autogenic behavior therapy, independent investigators hypothesized that biofeedback combined with AT yields better results than biofeedback without AT.[22,23,42,62-64,68]

A variety of clinical studies supported or confirmed this assumption. For example, in 468 migraine and tension-headache patients, the use of EMG (or hand) temperature feedback in combination with AT resulted in improvement in 56% and better results were noted in straight vascular headaches (76% improved; N = 105) than in psychogenic or mixed forms of headaches.[14] In a 1-year follow-up, study of 25 migraine and/or tension-headache patients found that a 5-day intensive autogenic feedback training program (hand temperature) was successful in 82.4%.[59] Cowings, Billingham, and Toscano, in search for a means to control the debilitating effects of motion sickness, found that groups of subjects who used biofeedback together with AT to simultaneously control multiple autonomic responses (i.e., heart rate, respiration rate, blood volume, pulse of face and hands) withstood the stress of Coriolis acceleration significantly better than did the control group.[10-13]

Available findings in the area of AFT show that the combination of BF and AT is a powerful tool in learning to voluntarily control a variety of bodily functions. Although this appears to be very encouraging from a mechanistic point of view of symptomatic treatment, further research is needed to clarify certain questions. Some of those questions are related to occasional observances that specific functional disturbances may occur after successful BF learning of the voluntary control of autonomic functions (e.g., local blood flow regulation, paresthesia, spermatogenesis).[42] Such functional disturbances may mean that forceful nonhomeostatic interferences in homeostatically controlled functions can lead to undesirable disturbances of specific sectors of the human system.

ABOUT NONINDICATIONS AND CONTRAINDICATIONS OF AUTOGENIC TRAINING

This section attempts to provide a general orientation on practical circumstances, functional disorders, and pathological conditions that affect or preclude the beneficial application of autogenic training (for details see Vols. I-III of *Autogenic Therapy*).[51,52,67]

Generally, a distinction between “nonindications,” “relative nonindications,” “contraindications,” and “relative contraindications” is made.[57]

The listings here included are subject to change as more information from clinical and experimental research becomes available.

The term *nonindication* signifies that it is not advisable to use autogenic training. The subcategory of *relative nonindications* is reserved for all those diseases and conditions that require other forms of treatment, but where the simultaneous practice of autogenic training (AT) is not known to cause undesirable effects. For example, in hyperemesis gravidarum (severe vomiting of pregnancy) heterohypnosis is considered the most effective approach; however, there is no reason why the patient should not practice AT as well. Similarly, a patient with acute appendicitis requiring surgery may derive certain benefits from practicing AT before and after the operation.

Nonindications

- Persons with severe mental deficiencies.
- Children below the age of 5 (age-adapted management for children age 5 and onwards required).
- When careful and critical control of the patient's training symptoms is not possible.
- Persons with lack of motivation to apply AT in an adequate manner (e.g., recalcitrant psychopaths).
- When a differential diagnostic evaluation of training symptoms (e.g., autogenic discharges versus nature of unrecognized pathological processes) is not possible (e.g., pain, disturbances of blood flow, hypoglycemia).
- During acute episodes of schizophrenic reaction.

Contraindications

Contraindication has been defined as "any condition, especially any condition of disease, which renders some particular line of treatment improper or undesirable."[57] Generally it is implied that the treatment in question may or is known to produce unfavorable reactions, functional changes, and sequels that are detrimental to the patient's health. Consequently, the therapeutic modality should not be used. Contraindications include:

- Persons with doubtful or impending myocardial infarction unless monitored (e.g., in intensive care units), and supervised by a physician with AT experience.
- During and directly after myocardial infarction, and in the presence of complicating disorders (e.g., arrhythmias, pulmonary embolism, extension of the infarct to the endocardial surface with systemic embolism) unless monitored and supervised by a physician with AT experience.[32]
- Trainees repeatedly showing significant (paradoxical) increases in blood pressure during AT.
- Diabetic patients (a) lacking reliable collaboration, or (b) in circumstances that do not permit careful clinical control over longer periods of time (18-24 months).
- Patients with hypoglycemic conditions: (a) when the differential diagnostic evaluation has not been completed, (b) when there is a lack of reliable collaboration, (c) when clinical or other circumstances are therapeutically unfavorable.
- Patients with glaucoma (i.e., primary chronic open angle or acute or chronic angle closure) when weekly tonometric control of intraocular tension is not guaranteed. AT must be

discontinued when increases of intraocular tension are noted on two consecutive control measurements within 7 days.

- Involutional psychotic reaction (subacute psychotic outpatients require careful individual evaluation before AT may be used).
- Trainees with paranoid reaction showing increase of persecutory or grandiose delusions during or after AT.
- Dissociative (nonpsychotic) reactions (e.g., depersonalization, dissociated personality, stupor, fugue, amnesia, dreamy state, somnambulism) unless under clinically well-supervised conditions.

Relative Contraindications

Relative contraindications are conditions that require particular caution in the application of a therapeutic approach. Such precautions may include modifications in procedure (e.g., not using certain standard formulas) or abandoning the line of treatment (e.g., AT) when undesirable reactions are noticed. Relative contraindications include:

I. Supportive background formula "I am at peace"
- Persons who are prone to experience unfavorable antithematic reactions (e.g., anxiety, restlessness, massive motor discharges).

II Supportive association of peaceful images
- Persons who have difficulties on finding or holding a "peaceful image;" who report that selected peaceful images assume dynamic (filmlike) qualities; who notice that the selected peaceful image changes spontaneously to include disturbing features.

III Trainees who frequently report the onset of anxiety or restlessness during and after the exercises should not practice AT without close supervision. They should be instructed to practice long series of exercises (e.g., 20 to 40), each or very short duration (e.g., 5-10 seconds). If improvement is not observed within about 2 weeks, AT should be discontinued.

IV First standard exercise (heaviness formulas)
- When trainees report strong and largely disagreeable cardiac and vasomotor reactions (e.g., congestion of the cranial region, flushing of face, chest pain, tachycardia, sensations of palpitations), one should proceed slowly with carefully adapted reduced formulas.

V Second standard exercise (warmth formulas)
- When the environmental temperature is unusually high; or when SE II formulas elicit strong vasomotor reactions (e.g., swelling of training limb, disagreeable pulsating or "pressure," dizziness, feeling of emptiness in head, initial symptoms of fainting). Such reactions require a step-by-step approach with "reduced formulas" and brief exercise.

VI Third standard exercise (heart)
- Frequent occurrence of disagreeable and disturbing modalities of heart-related autogenic discharged (e.g., anxiety, uneasiness, tenseness, cramp-like pain, precordial pressure, tachycardia).

- Patients with cardiac disorders or others who are unduly heart-conscious (e.g., "infarctophobia," "cardiac neurosis") and show marked apprehensiveness toward their heart, unless very careful and consistent supervision is possible.
- Trainees with a pattern of undesirable reactions during SE I and SE II (e.g., sharp drop in blood pressure, marked decrease of heart rate, disagreeable chest sensations, dizziness, headache anxiety) may try SE III after all other standard exercises have been practiced and the disturbing reactivity has subsided.
- Hypertensive patients reacting with sudden and marked decrease in blood pressure and feeling of uneasiness and anxiety.
- Patients on regular hemodialysis treatment when disagreeable cardiac sensation or complaints are reported.
- Hyperthyroid conditions.
- In children under the age of 10.

VII Fourth standard exercise (respiration)

- Trainees suffering from functional disorders or acute pathological processes of the respiratory system (e.g., bronchial asthma, pulmonary tuberculosis). In many of these cases the fourth standard formula should be postponed till the end of the autogenic standard exercises.
- Trainees who previously practiced methods that included voluntary control of respiratory functions and who find it unusually difficult to relearn a passive oriented attitude while practicing "Breathing calm and regular," "It breathes me." In these cases, SE IV should be postponed until all standard exercises have been practiced satisfactorily.

VIII Fifth standard exercise (solar plexus)

- When the nature and location of the solar plexus cannot be adequately explained, or cannot be adequately understood (e.g., children).
- Onset of pain in the abdominal area during SE V.
- Trainees with disorders of the digestive tract.
- Diabetic patients showing a marked decrease in insulin tolerance with frequent episodes of rapid onset of hypoglycemia.
- Patients with hyperinsulinism or other forms of hypoglycemia.
- Trainees with angina pectoris and frequent disagreeable reactions during SE V.
- During pregnancy.
- In children.

IX Sixth standard exercise (forehead)

- Trainees who repeatedly report onset or worsening of headache or migraine during or after SE VI.
- Trainees with brain injuries: 50% require a case-adaptive modification of SE VI or have to stop the formula.
- Epileptic patients with marked vasomotor instability affecting the cranial region and other undesirable reactivity.

X Partial exercise ("My neck and shoulders are heavy")

- Not during stages of sleep deficiency or exhaustion while engaged in potentially hazardous activities because of the risk of sudden onset of sleep.

- Not to be used in a standing or simple sitting posture by patients suffering from narcolepsy, epilepsy, hypotension, and marked degrees of vasomotor instability.

XI Space exercises

- The first space exercise ("I imagine the space between my eyes," etc.) when unduly disturbing reactions (e.g., anxiety, dizziness, vomiting) occur more than twice during or after the exercise and/or when paradoxical increases in heart rate or blood pressure are recorded.
- The second space exercise ("My right arm is filled with space," etc.) should not be practiced when frequent control of blood pressure (i.e., before, after exercises) is not possible and when increases in blood pressure are noted on two subsequent occasions (i.e., within 7 days).

ACKNOWLEDGMENT. The material in this chapter was taken in part from W. Luthe and S.Blumberger, Autogenic therapy. In E. D. Wittkower and H. Warnes (Eds.) *Psychosomatic Medicine. Its clinical applications.* New York/London: Harper & Row, 1977).

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